

1 What properties describe how substances react to form new substances?

- A elements
- B chemical properties
- C compounds
- D physical properties

B

2 Which properties can be seen or measured without changing the material?

- A physical properties
- B matter
- C chemical properties
- D elements

A

3 Which term describes the basic building blocks of matter?

- A hydrogen
- B chemical properties
- C matter
- D elements

D

4 Aluminum and copper are _____ metals.

- A mixed
- B alloys
- C pure
- D physical

C

5 The _____ of an object changes when the pull of gravity changes.

- A mass
- B weight
- C properties
- D magnetisms

B

6 Which instrument measures the mass of an object?

- A balance
- B beaker
- C spring scale
- D barometer

A

7 Magnetism is a _____ property.

- A chemical
- B matter
- C substance
- D physical

D

8 The ability of a material to burn is a _____ property.

- A physical
- B chemical
- C balance
- D state

B

9 Which statement correctly describes living things?

- A They are made mostly from just a few elements.
- B They have equal amounts of each element.
- C They are made mostly of iron and other metals.
- D They have only oxygen and carbon in their bodies.

A

10 Which of these is a chemical property of iron?

- A its color
- B its magnetism
- C its ability to form rust
- D its mass

C

- 11 Ninety-six percent of the human body is made of oxygen, nitrogen, hydrogen, and
- A silicon.
 - B carbon.
 - C sodium.
 - D nitrogen.
- 12 Which of the following is a chemical property of water?
- A It freezes at 0 degrees C.
 - B It changes to a gas at 100 degrees C.
 - C It does not burn.
 - D It can dissolve other substances.
- 13 What is the smallest part of a substance made from more than one atom that still has all the properties of the substance?
- A electron
 - B atom
 - C molecule
 - D proton
- 14 A(n) _____ is a negatively charged particle that moves around the nucleus of an atom.
- A electron
 - B proton
 - C neutron
 - D atom

15 What is the smallest particle of an element that has the properties of the element?

- A proton
- B atomic number
- C molecule
- D atom

D

16 Which term describes the number of protons in an atom's nucleus?

- A atomic number
- B atom
- C proton
- D element

A

17 _____ particles in an atom's nucleus are positively charged.

- A Atom
- B Electron
- C Neutron
- D Proton

D

18 Elements in the _____ table are organized according to their chemical properties.

- A element
- B periodic
- C molecule
- D group

B

19 Two atoms that have the same number of protons must be the same _____.

- A molecule
- B group
- C atom
- D element

D

- 20 Computer images of _____ show they often appear in well-ordered arrays.
- A periodic
 - B properties
 - C atoms
 - D electrons
- 21 What is the smallest particle of an element that still has the properties of the element?
- A a molecule
 - B a proton
 - C an atom
 - D a compound
- 22 Which metal is a pure element?
- A brass
 - B copper
 - C steel
 - D bronze
- 23 What is the smallest part of the substance water that still has all the properties of water?
- A a molecule
 - B an atom
 - C a compound
 - D an electron

C

C

B

A

24 What are alloys?

- A groups of elements on the periodic table
- B mixtures made when a solid dissolves in a liquid
- C metals made by purifying rocks and minerals
- D metals made by mixing two or more metals together

D

25 What could you notice from an image of the carbon atoms in graphite made by using a special electron microscope?

- A The atoms have different shapes.
- B The atoms have different sizes.
- C The atoms are in a well-ordered array.
- D The atoms are in random positions.

C

26 How are the elements in the periodic table arranged?

- A by their names
- B by their properties
- C by their dates of discovery
- D by their chemical symbols

B

27 The atomic number of an element is

- A the number of protons it has.
- B the number of neutrons it has.
- C the number of protons plus neutrons.
- D the number of hydrogen atoms.

A

28 Which of these forms when atoms combine?

- A elements
- B protons
- C larger atoms
- D molecules

D

29 Which of the following statements about atoms is true?

- A They can be seen with the unaided eye.
- B They can be seen with a light microscope.
- C No image of an atom has ever been produced.
- D Images of atoms can be made with electron microscopes.

C

30 What characteristic was used to arrange the elements in the Periodic Table of the Elements?

- A atomic weight
- B symbol
- C molecular weight
- D atomic number

D

31 The Periodic Table is arranged so that the elements in each column have similar

- A chemical properties.
- B physical properties.
- C atomic numbers.
- D atomic weights.

A

32 Helium has an atomic number of two. What can be inferred about helium from this fact?

- A It has two neutrons.
- B It has two protons.
- C It has two atoms in each molecule.
- D It has one proton and one neutron.

B

33 Which of the following is an alloy?

- A silver
- B copper
- C nickel
- D brass

D

34 Which metal is a liquid at room temperature?

- A nickel
- B mercury
- C copper
- D gold

B

35 Which property makes a metal useful in electrical devices?

- A being a conductor
- B being malleable
- C being shiny
- D being a solid at room temperature

A

36 Which of the following is a property of a nonmetal?

- A being ductile
- B being malleable
- C being a poor conductor of electricity
- D being a good conductor of heat

C

37 Which term describes a combination of two or more elements?

- A salt
- B compound
- C formula
- D atom

B

38 Which substance forms when an acid and a base react?

- A compound
- B salt
- C element
- D water

B

39 Which of the following terms describes symbols that show the number and kinds of elements in a compound?

- A compound
- B molecule
- C solution
- D formula

D

40 What is the product of the mixing of hydrochloric acid and sodium hydroxide?

- A table salt
- B sodium hydroxide
- C crystals
- D sodium metal

A

41 The compound that makes up 60 percent of the human body is _____.

A CO_2

B H_2O

C NO_2

D $\text{C}_6\text{H}_{12}\text{O}_6$

B

42 Two different compounds can contain the same _____.

- A element
- B molecule
- C hydrogen
- D atom

A

43 All salts can form _____.

- A cubes
- B squares
- C crystals
- D circles

C

44 One property of most salts is that they melt at _____ temperatures.

- A high
- B cold
- C low
- D medium

A

45 Which property do all salts have in common?

- A All salts form crystals.
- B All salts are poisonous.
- C All salts burn your skin.
- D All salts have a white color.

A

46 What are most salts made from?

- A at least one metal and one nonmetal
- B only metal elements
- C only nonmetal elements
- D a mixture of water and iron

A

47 The chemical formula for water is

- A H_2O
- B HO
- C HO_2
- D H_2O_2

A

48 Which of the following is a property of carbon dioxide?

- A It does not burn.
- B It is a white solid at room temperature.
- C It is sweet.
- D It is highly reactive.

A

49 Which compound makes up 60 percent of your body?

- A glucose
- B DNA
- C water
- D sodium chloride

C

50 A _____ has different materials placed together that are not chemically combined.

- A solute
- B solution
- C solvent
- D mixture

D

51 Which term describes a substance that is dissolved in another substance?

- A compound
- B solvent
- C solute
- D mixture

C

52 Which term describes a substance in which a different substance is dissolved?

- A solvent
- B solute
- C solution
- D molecule

A

53 A _____ is different substances placed together that are spread out evenly.

- A solution
- B solvent
- C solute
- D molecule

A

54 Salt water is an example of a _____.

- A mixture
- B molecule
- C material
- D compound

A

- 55 A _____ solution has a large amount of solute for the amount of solvent.
- A dilute
 - B mixture
 - C solubility
 - D concentrated
- 56 Chromatography can be used to _____ substances.
- A identify
 - B collect
 - C dissolve
 - D dilute
- 57 What compounds are not chemically combined?
- A solute
 - B solution
 - C mixture
 - D material
- 58 Which of these is a mixture that has one substance evenly dissolved in another substance?
- A a metal
 - B a compound
 - C a solution
 - D a molecule
- 59 Which of these is a solute in seawater?
- A salt
 - B water
 - C sand
 - D fish

60 What happens when a chemical change occurs?

- A Atoms change into energy.
- B Atoms have a physical change.
- C Atoms change into other kinds of atoms.
- D Atoms rearrange to form matter with different properties.

D

61 Which of the following might be evidence of a chemical reaction?

- A formation of magnetism
- B formation of a gas
- C formation of gravity
- D formation of new elements

B

62 Which of these is an example of matter that has gone through only a physical change?

- A copper that has been hammered into a sheet
- B a potato that has been cooked
- C iron that has changed to rust
- D candle wax that has burned

A

63 Which change occurs when one kind of matter changes into a different kind of matter with different properties?

- A chemical
- B material
- C solubility
- D physical

A

64 Which type of change occurs when the matter keeps the same chemical properties?

- A material
- B chemical
- C matter
- D physical

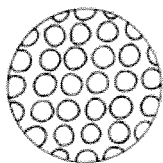
D

65 _____ has three states: solid, liquid, and gas.

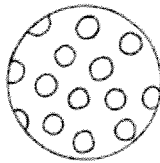
- A Phase
- B Matter
- C Compound
- D Physical

B

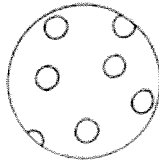
66 Models of the particles in solids, liquids, and gases are shown.



Solid



Liquid



Gas

A

Which list gives the correct order of the matter, from particles with the least energy to particles with the most energy?

- A solid, liquid, gas
- B solid, gas, liquid
- C gas, liquid, solid
- D gas, solid, liquid

67 Which statement describes a solid?

- A It takes the shape of its container.
- B It has particles that flow over one another.
- C It has a definite shape and volume.
- D Its particles spread out evenly in a container.

C

68 What is the temperature at which a liquid turns into a solid?

- A boiling temperature
- B freezing temperature
- C sublimation temperature
- D evaporation temperature

B

69 Which of these is an example of condensation?

- A water drying from an umbrella
- B ice cream melting
- C water freezing to form ice
- D dew forming on the grass

D

70 _____ takes place when particles leave a liquid and become a gas.

- A Sublimation
- B Evaporation
- C Condesation
- D Precipitation

B

71 Which of the following terms describes when a gas turns into a liquid?

- A evaporation
- B sublimation
- C melting
- D condensation

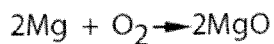
D

72 What takes place when a solid changes directly into a gas?

- A freezing
- B sublimation
- C condensation
- D precipitation

B

- 73 Magnesium reacts with oxygen and burns with a bright glow. The chemical equation for this reaction is shown below.



Magnesium Oxygen Magnesium Oxide

Which of these is a product of the reaction?

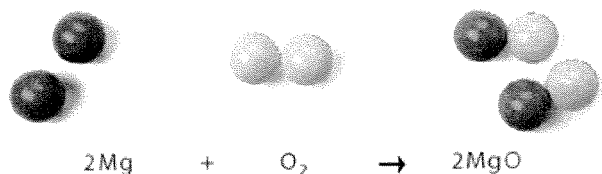
- A magnesium
 - B oxygen
 - C magnesium and oxygen
 - D magnesium oxide
- 74 What is water's state of matter at room temperature?
- A vapor
 - B solid
 - C gas
 - D liquid
- 75 By which process does a solid change to a gas?
- A evaporation
 - B melting
 - C sublimation
 - D condensation

76 Hydrogen peroxide can break apart to form water and oxygen gas. Which type of chemical reaction is this?

- A combination reaction
- B replacement reaction
- C decomposition reaction
- D physical reaction

A

77 At a high temperature, magnesium reacts with oxygen, as shown below.



B

Which are the reactants in this reaction?

- A magnesium and oxygen
- B magnesium and magnesium oxide
- C oxygen and magnesium oxide
- D magnesium oxide and heat

78 Which of these is true about matter during a chemical reaction?

- A The mass of the reactants is not related to the mass of the products.
- B The mass of the reactants is equal to the mass of the products.
- C The mass of the reactants is less than the mass of the products.
- D The mass of the reactants is greater than the mass of the products.

D

79 Which of the following can only be separated by a chemical process?

- A matter
- B mixture
- C solution
- D compound

D

80 A _____ describes a substance used in a chemical reaction.

- A chemical equation
- B reactant
- C product
- D matter

B

81 Which term describes a substance made during a chemical reaction?

- A product
- B matter
- C magnesium
- D decomposition

A

82 A _____ is a formula that describes what happens during a chemical reaction.

- A product
- B chemical equation
- C solution
- D combination reaction

B

83 Reactants are listed on the _____ side of the chemical equation.

- A top
- B right
- C bottom
- D left

D

Chapter1 and Chapter 2

- 84 The Law of Conservation of Mass states that _____ cannot be created or destroyed during a chemical reaction.
- A matter
 - B reactants
 - C products
 - D replacement
- 85 What type of reaction describes when elements or compounds come together to form new compounds?
- A replacement
 - B decomposition
 - C combination
 - D chemical
- 86 Compounds split to form smaller compounds in a _____ reaction.
- A decomposition
 - B replacement
 - C chemical
 - D combination
- 87 In _____ reactions, compounds split apart and switch places.
- A combination
 - B chemical
 - C decomposition
 - D replacement
- 88 When do atoms rearrange to form new substances?
- A when a chemical change occurs
 - B when a solid melts
 - C when a physical change occurs
 - D when a liquid changes to gas

89 Which of the following is used to identify acids and bases?

- A indicator paper
- B bar magnet
- C flame test
- D filter paper

A

90 _____ properties can be used to separate some mixtures.

- A Mixture
- B Physical
- C Chemical
- D Gas

B

91 A(n) _____ is a uniform mixture of two substances.

- A base
- B acid
- C solution
- D replacement reaction

C